

# **Magforms SLA 3D Printer Technical Specifications**







#### PRINTER PROPERTIES

3D Printer Helios-P 450 1600 × 1600 × 2050 mm 3D Printer Size Crated (WxDxH)  $63 \times 63 \times 80.7$  in Without monitor and LED light: 1380 × 1440 × 1800 mm 54.3 × 56.7 × 70.9 in 3D Printer Size Uncrated (WxDxH) With monitor and LED light: 2050 × 1560 × 2120 mm  $80.7 \times 61.4 \times 83.5$  in ~1300 kg 3D Printer Weight Crated 2866 lbs 1167 kg 3D Printer Weight Uncrated 2573 lbs 220-240 VAC 50/60 Hz **Electrical Requirements** Single Phase 2.5 kW 22-26 °C **Operating Temperature Range** 71.6-78.8 °F 35-45 %RH **Humidity Range** Non-condensing Solid-state frequency tripled Nd:YVO4 Laser Marble Recoater Rim UPS Accessories Drain Device **Post Curing Apparatus** 

Helios-P 600 1800 × 1700 × 2200 mm 70.9 × 66.9 × 86.6 in Without monitor and LED light: 1490 × 1580 × 1970 mm 58.7 × 62.2 × 77.6 in With monitor and LED light: 2160 × 1690 × 2300 mm  $85.0 \times 66.5 \times 90.6$  in ~1550 kg 3417 lbs 1428 kg 3148 lbs 220-240 VAC 50/60 Hz Single Phase 2.5 kW 22-26 °C 71.6-78.8 °F 35-45 %RH Non-condensing Solid-state frequency tripled Nd:YVO4 Marble UPS Drain Device

PCA600 Post Curing Apparatus

Helios-P 800 Without monitor and LED light: 1760 × 1730 × 2100 mm  $65.7 \times 68.1 \times 82.7$  in With monitor and LED light: 2400 × 1800 × 2420 mm 94.5 × 68.1 × 95.3 in 1700 kg 3748 lbs 220-240 VAC 50/60 Hz Single Phase 2.5 kW 22-26 °C 71.6-78.8 °F 35-45 %RH Non-condensing Solid-state frequency tripled Nd:YVO4 Marble UPS Drain Device PCA800 Post Curing Apparatus

# **PRINTING SPECIFICATIONS**

| 3D Printer                               | Helios-P 450   | Helios-P 600   | Helios-P 800   |
|--|--|--|--|
| Max Build Volume (xyz)                   | Flexible build volume options with customized resin vat.           | Flexible build volume options with customized resin vat.           | Flexible build volume options with customized resin vat.           |
| Full                                     | 450 × 450 × 450 mm   | 600 × 600 × 500 mm   | 800 × 800 × 550 mm   |
|  | 17.7 × 17.7 × 17.7 in  | 23.6 × 23.6 × 19.7 in  | 31.5 × 31.5 × 21.7in   |
|  | 175 L  | 297 L  | 510 L  |
|  | 46.2 U.S. gal  | 78.5 U.S. gal  | 136 U.S. gal   |
| Custom                                   | The height of the resin vat is customized (less than full height). | The height of the resin vat is customized (less than full height). | The height of the resin vat is customized (less than full height). |
| Resin Vat Capacity                       | ~206 kg  | ~350 kg  | ~610 kg  |
|  | 454 lbs  | 772 lbs  | 1345 lbs   |
| Accuracy                                 | L ≤ 100 mm: ± 0.1 mm   | L ≤ 100 mm: ± 0.1 mm   | L ≤ 100 mm: ± 0.15 mm  |
|  | L ≤ 3.94 in: ± 0.004 in  | L ≤ 3.94 in: ± 0.004 in  | L ≤ 3.94 in: ± 0.006 in  |
|  | L > 100 mm: ± 0.1% × L   | L > 100 mm: ± 0.1% × L   | L > 100 mm: ± 0.15% × L  |
|  | L > 3.94 in: ± 0.1% × L  | L > 3.94 in: ± 0.1% × L  | L > 3.94 in: ± 0.15% × L   |
|  | *Accuracy may vary depending onparameters, part                    | *Accuracy may vary depending onparameters, part                    | *Accuracy may vary depending onparameters, part                    |
|  | geometry and size, pre-processing or post-                         | geometry and size, pre-processing or post-                         | geometry and size, pre-processing or post-processing               |
|  | processing methods, materials                                      | processing methods, materials                                      | methods, materials   |
| Slicing Thickness                        | 0.05-0.15 mm   | 0.05-0.15 mm   | 0.05-0.15 mm   |
|  | 0.002-0.006 in   | 0.002-0.006 in   | 0.002-0.006 in   |
| Intelligent Scanning Strategy            | Viable Laser Beam  | Viable Laser Beam  | Viable Laser Beam  |
| XY Resolution                            | 0.025 mm   | 0.025 mm   | 0.025 mm   |
|  | 0.001 in   | 0.001 in   | 0.001 in   |
|  | *XY resolution describes image grayscale adjust.                   | *XY resolution describes image grayscale adjust.                   | *XY resolution describes image grayscale adjust.                   |
| Fine Feature/Outer Surface Scanning      | 0.15-0.2 mm  | 0.15-0.2 mm  | 0.15-0.2 mm  |
|  | 0.006-0.008 in   | 0.006-0.008 in   | 0.006-0.008 in   |
| Larger Feature/Internal Surface Scanning | 0.5-0.6 mm   | 0.5-0.6 mm   | 0.5-0.6 mm   |
|  | 0.020-0.024 in   | 0.020-0.024 in   | 0.020-0.024 in   |

### **MATERIALS**

Build Materials

Please refer to the TDS and MSDS for more information for the printing material.

Please refer to the TDS and MSDS for more information for the printing material.

Please refer to the TDS and MSDS for more information for the printing material.

Please refer to the TDS and MSDS for more information for the printing material.

10 kg per barrel

10 kg per barrel

## **SOFTWARE AND NETWORK**

| 3D Printer Software               | Magforms iBuild 2.0 | Magforms iBuild 2.0 | Magforms iBuild 2.0 |
|-----------------------------------|---------------------|---------------------|---------------------|
| Printer Operating System          | Windows® 10         | Windows® 10         | Windows® 10         |
| Input Data File Formats Supported | SLC,CLI             | SLC,CLI             | SLC,CLI             |